IB910

Dual Intel® Xeon™ E7501
Full Size CPU Card

USER'S MANUAL

Version 1.0

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Introduction

Product Description

The IB910 Intel® Xeon™ full size CPU card is based on the Intel® E7501 chipset. With four 184-pin DDR memory sockets, up to 8GB of memory is supported. A dual-channel DDR-200/266 memory interface provides a maximum memory bandwidth of 3.2 GB/s through a 144-bit wide, 200/266 MHz Double Data Rate SDRAM memory interface with densities up to 512 megabits is supported.

The Intel® Xeon™ Processor provides exceptional performance for applications running on advanced operating systems and delivers unparalleled computing power for powerful workstations, internet infrastructure, and departmental server applications. The Intel® NetBurst™ micro-architecture and Hyper- Threading Technology deliver outstanding performance and headroom for peak internet server workloads, resulting in faster response times, support for more users, and improved scalability.

The on board Intel® E7501 Chipset Memory Controller Hub (MCH) is the central hub for all data passing through core system elements such as the dual Intel Xeon™ processors with 512 KB L2 cache via the system bus interface, the memory via memory interface, and both the 64-bit PCI/PCI-X and I/O controller hubs via Intel® Hub Interfaces.

IB910's Intel® 82870P2 64-bit PCI/PCI-X Controller Hub 2 (P64H2) connects to the MCH through a point-to-point Hub Interface 2.0 connection. P64H2 devices can be attached to the MCH with each providing an I/O bandwidth greater than 1 GB/s.

Through the Intel® 82801CA I/O Controller Hub 3-S (ICH3-S) that connects to the MCH through a point-to-point Hub Interface 1.5 connection, IB910 features two-channel Ultra ATA/100 bus master IDE interface and four USB ports. It also supports System Manageability Bus 2.0 (SMBus 2.0) and PCI 2.2-compliant interfaces.

This CPU card represents the perfect choice for those who want superior performance for rugged and demanding applications in industrial automation, telecommunications and data-intensive applications.

Checklist

Your IB910 package should include the items listed below.

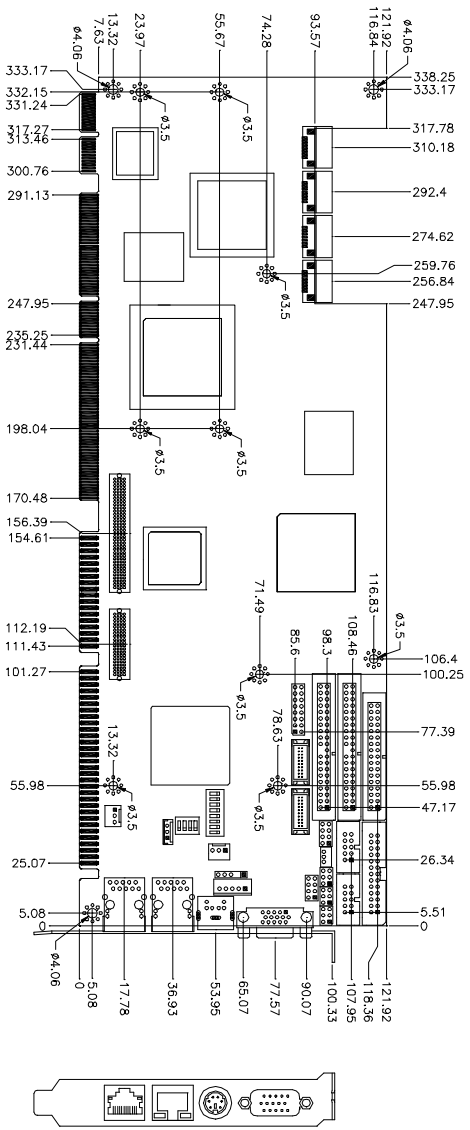
- The IB910 Industrial CPU Card
- This User's Manual
- 2 IDE Ribbon Cable
- 1 Floppy Ribbon Connector
- 2 Serial Port Ribbon Cable and 1 Parallel Port Attached to a Mounting Bracket
- 1 Y-Cable supporting a PS/2 Keyboard and a PS/2 Mouse
- 1 CD containing the following:
  - Chipset Drivers
  - Flash Memory Utility
- Marvell 88sx5041 Windows Drivers in floppy 1
- 1 CPU heatsink & CPU screw (6 pcs) pack
- 1 Fan module
- Fan screw (4 pcs) pack
- Hexagonal standoffs (10.8mm x 6pcs, 16mm x 1pc) pack for INT-mPGA-package processors
- 24pin EPS power supply adapter cable

  * 1 power cable (PW38) EPS 24-pin to ATX 20-pin
- 1 power cable (PW39) EPS 8- pin to 4-pin
- USB cable with bracket
- SATA HDD cable, optional SATA power cable

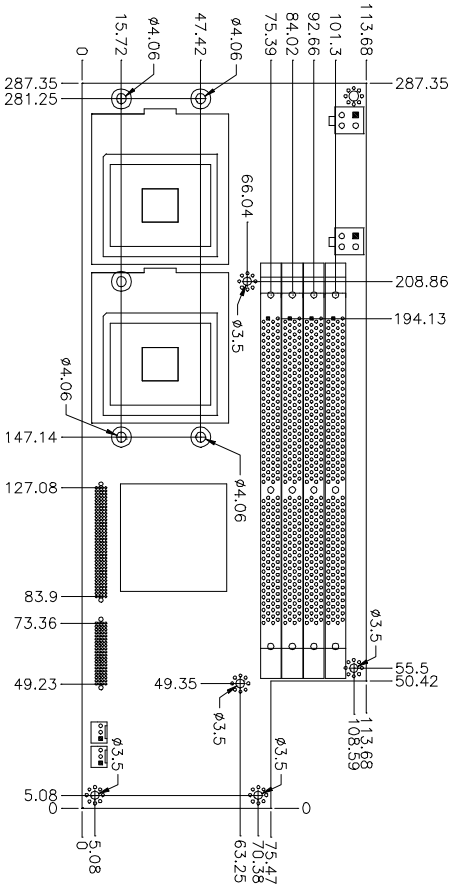
Specifications

CPU Socket	Dual mPGA604 ZIF socket
CPU	Intel® Xeon™ Processor, 1.8GHz~3.06GHz+ Supports Hyper-Threading technology
Chipset	Intel® E7501 chipset E7501 Memory Controller Hub (MCH) 82801CA Integrated Controller Hub (ICH3-S) 82870P2 64-bit PCI/PCI-X Controller (P64H2)
Bus Frequency	System Bus: 533Mhz (E7501 chipset) Hub Link 2.0: 1GB/s PCI-X (on board): 64-bit/133MHz PCI : 32-bit/33MHz/66MHz or 64-bit/33MHz/66MHz ISA : 16-bit/8MHz **Remarks**: PCI 66Mhz/64-bit requires 3.3V voltage.
L2 Cache	512K, CPU integrated
BIOS	Award BIOS, 4M FWH
System Memory	Four 184-pin DDR memory slots Up to 8GB memory capacity PC266 (E7501) support One 144-bit wide DDR memory port Supports x72 ECC registered DIMMs
VGA	ATI M7 VGA controller, 16/32MB embedded VGA memory Supports CRT, LVDS (24-bit), dual channel interface
LAN	Intel 82546EB Dual Port Gigabit Ethernet Controller PCI-X 1.0a compliant bus supports 100 MHz
LPC I/O	Winbond 83627HF supports parallel port, COM1 (RS232), COM2 (RS232/422/485) serial ports, FDD controller, hardware monitor
SATA	Marvell 5041 SATA Single Controller, supports 4 ports (PCI-X bus) & support Boot Rom function
IDE Interface	Chipset built-in; two enhanced IDE supports 4 IDE devices including UDMA33/66/100, PIO mode 4 and bus master
FDD Interface	Supports up to two floppy disk drives
Parallel Port	One parallel port supports SPP/EPP/ECP modes
Serial Ports	One RS-232/422/485 and one RS-232 port
Watchdog Timer	Generates system reset; 256 levels
USB	Four USB ports, USB 1.1 compliant
Keyboard and Mouse	PS/2 type connectors
ISA High Drive	Winbond W83628, W83629 PCI to ISA Bridge Chip
Daughter board IB910R	Bridge connection between IB910 and IB910R IB910 (ICH3-S+P64H2+LAN+VGA+LPC+PCI TO ISA) IB910R (CPU+DDR DIMM+E7501)
Power Connector	ATX 12V power connector To support dual Xeon, it must use EPS power (500W above)
Form Factor	Full Size CPU Card
Dimensions	338mm x 122mm (13.3” x 4.8”)

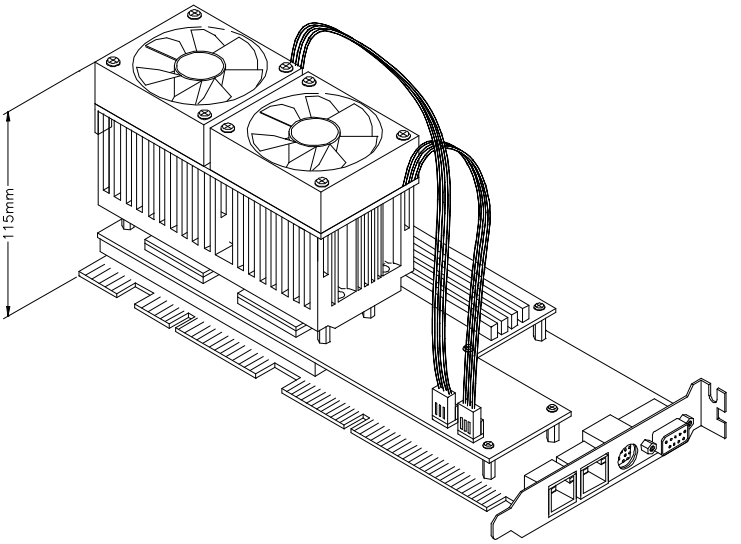
Board Dimensions



Dimensions of IB910R



Dimensions (Height) When Installed with Cooler



Installations

This section provides information on how to use the jumpers and connectors on the IB910 in order to set up a workable system. The topics covered are:

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IMPORTANT NOTE AND WARNING:

Ensure that the CPU heat sink and the CPU top surface are in total contact to avoid CPU overheating problem. Your IB910 is programmed to protect the CPU card when this happens.

When the IB910 detects the CPU is not fully in contact with the heat sink, it shuts off the CPU voltage. In this case, the user will not be able to turn off the system even if the power button is pressed for more than four seconds, but only by cutting the power to the system. At this point, the user must check if there is sufficient contact between the CPU and the heat sink.

Installing the CPU

Intel Xeon processor feature set overview

1. FC-mPGA2P package for 533MHz FSB Xeon™

Use 9.3mm hexagonal standoffs.

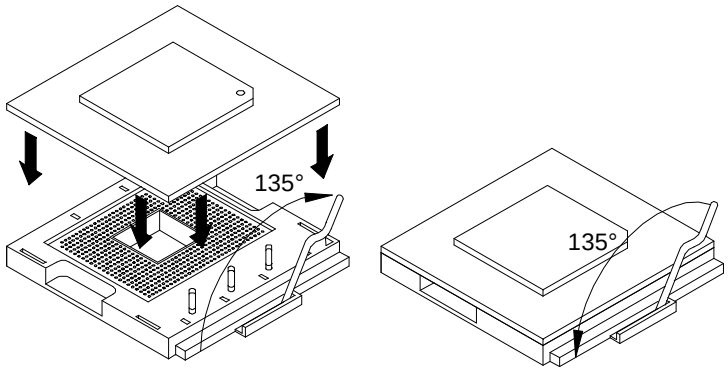
Note: By default, 9.3mm hexagonal standoffs are installed on the CPU card for the FC-mPGA package processor.

1. INT-mPGA package for 400MHz FSB Xeon™

Use 10.8mm hexagonal standoffs.

Note: When installing INT-mPGA package Xeon™, instead of using 9.3mm hexagonal standoffs, use 10.8mm hexagonal standoffs that are also provided with the CPU card package.

The IB910 CPU Card supports dual CPU sockets for Intel® Xeon™ processors. The sockets come with a lever to secure the processor. Raise this lever to allow the insertion of the processor. Place the processor into the socket by making sure the notch on the corner of the CPU corresponds with the notch on the inside of the socket. Once the processor has slide into the socket, return the lever to the lock position. Refer to the figures below.



IMPORTANT NOTE AND WARNING:

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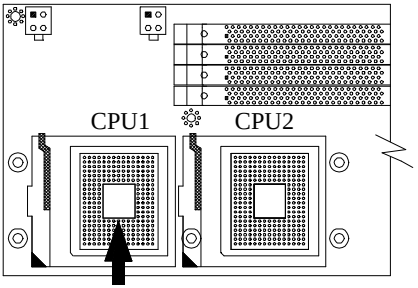
When the IB910 detects the CPU is not fully in contact with the heat sink, it shuts off the CPU voltage. In this case, the user will not be able to turn off the system even if the power button is pressed for more than four seconds, but only by cutting the power to the system. At this point, the user must check if there is sufficient contact between the CPU and the heat sink.

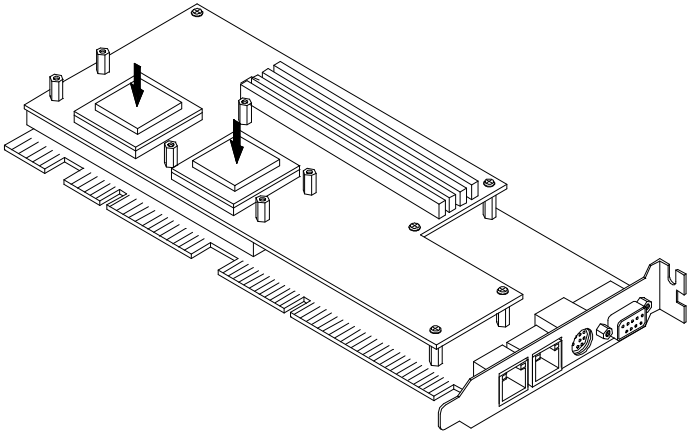
Installing Single FC-mPGA2P Package location at CPU1 Socket



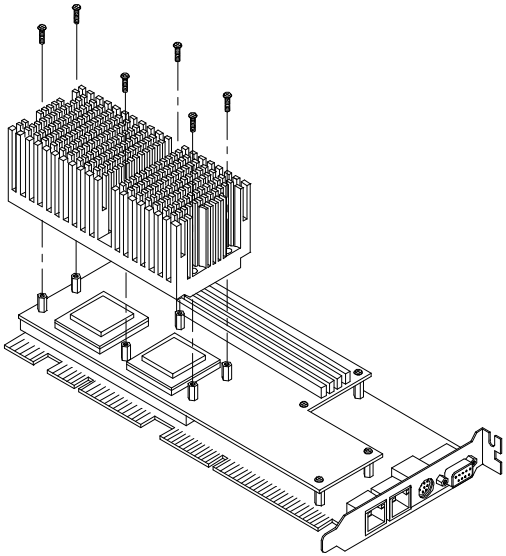
NOTE:
1. If only a single processor is used, the processor must be populated in CPU1 socket.
2. If dual processors are used, CPU1 and CPU2 must have same stepping and frequency and CPU1 socket must be populated first.

Installing the Processor Heatsink

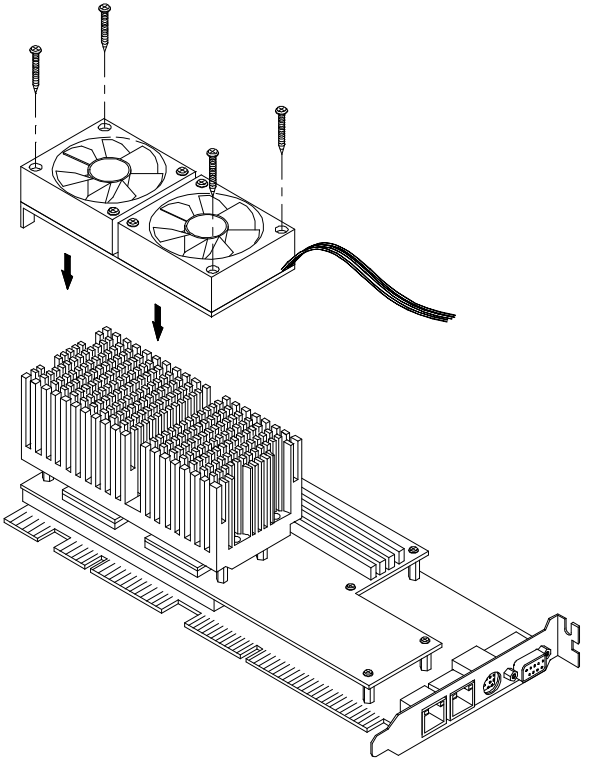
1. Insert the processor(s) first. Use CPU1 socket when installing a single processor and CPU1 and CPU2 sockets when installing two processors.



2. Use the six (6) screws that came with the heatsink to screw the heatsink onto the CPU card.

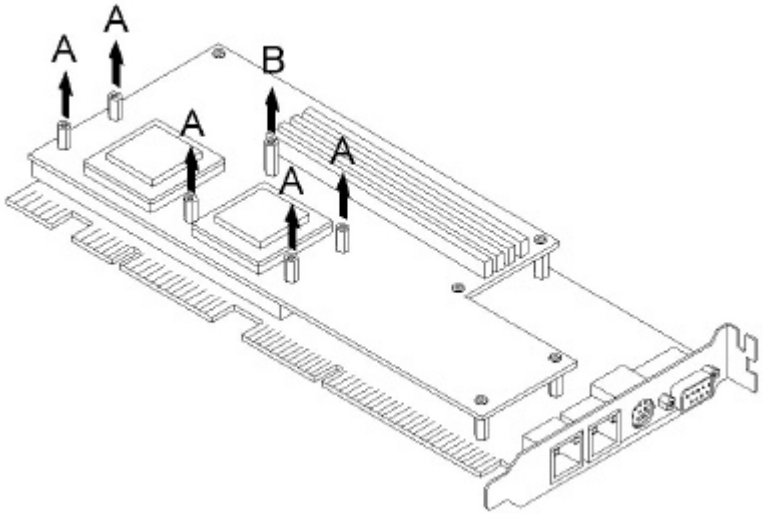


3. Install the fans with the four screws.

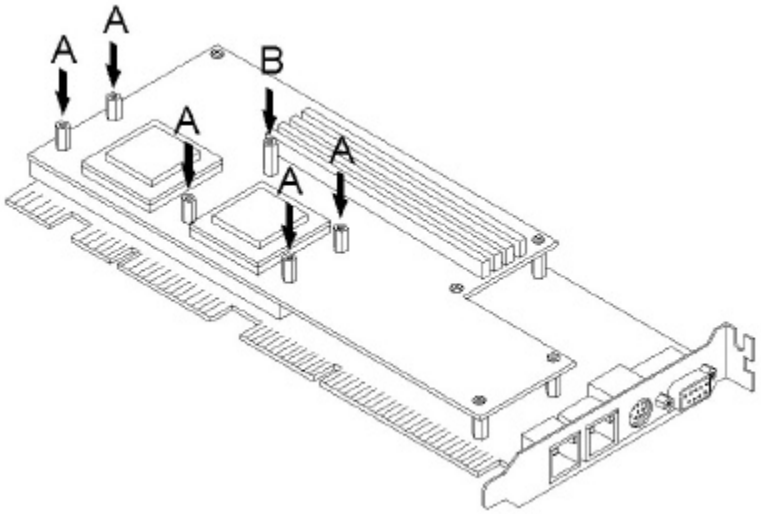


Note: If you are using processors with INT-mPGA package, you have to remove the 6 (six) 9.3mm hexagonal standoffs that were installed when you received the CPU card and replace them with 10.8mm hexagonal standoffs that are provided with the CPU card package. You may then proceed to install the heatsink and the cooling fans accordingly. See reference pictures on the next page.

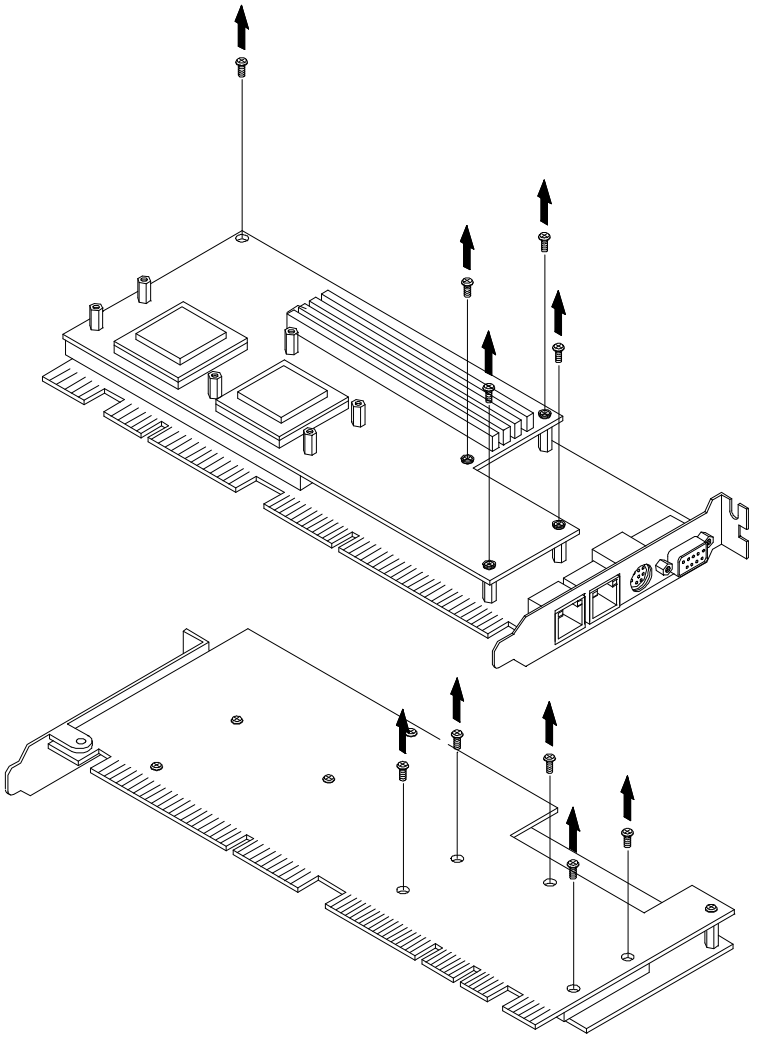
Removing 5 (five) 9.3mm (**A**) and 1 (one) 13.5mm (**B**) standoffs.



Use 5 (five) 10.8mm (**A**) and 1 (one) 16mm (**B**) standoffs when you are using Xeon™ processors in INT-MPGA package.



Removing the IB910R Board on IB910

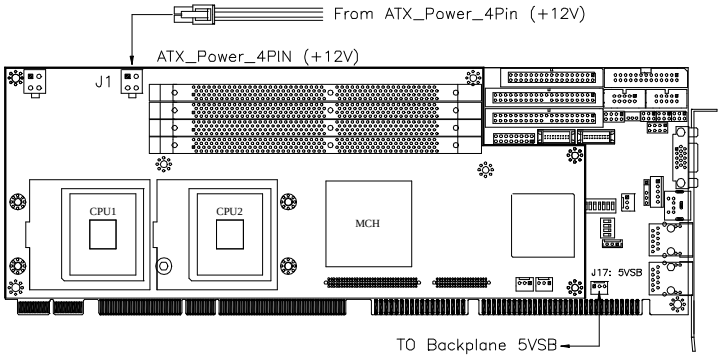


ATX Power Installation

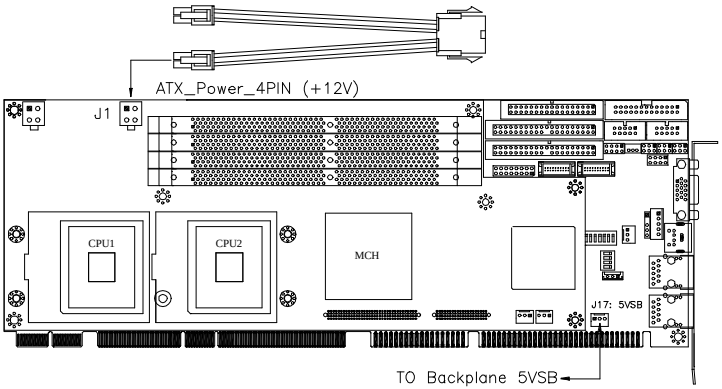
System power is provided to the IB910 CPU card with the J1, J2 and J17 ATX power connectors. Please note that the J17 external ATX power connector should be connected to the backplane for IB910 to function. J17 is a 3-pin power connector. J1 and J2 are 4-pin 12V power connectors. J1 and J2 are to be connected to the ATX power supply.

For single processor, voltage power (4-pin +12V) requires +8A. For the system power (ATX 20-pin), 350 watts is recommended.

Installing the +12V power cable in J1 for single processor.

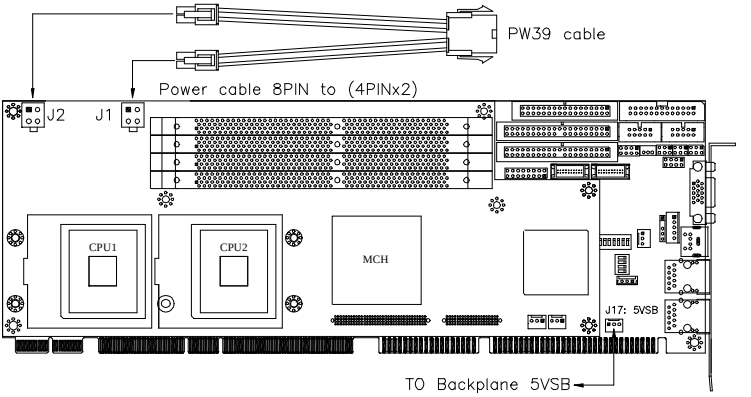


Installing the two 4-pin power cable (PW39) when used with EPS power supply.



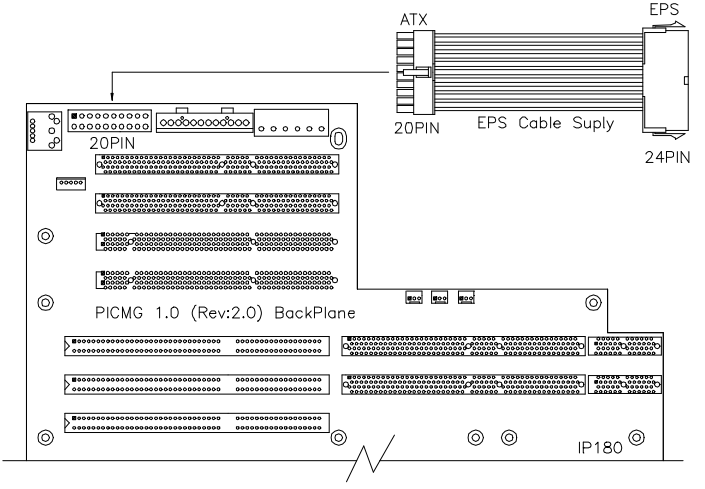
For dual processors, the 4-pin +12V voltage power requires +16A. For the system power, a 500W EPS (24-pin) power supply is recommended.

Installing the 8-pin power cable (PW39) to J1 and J2

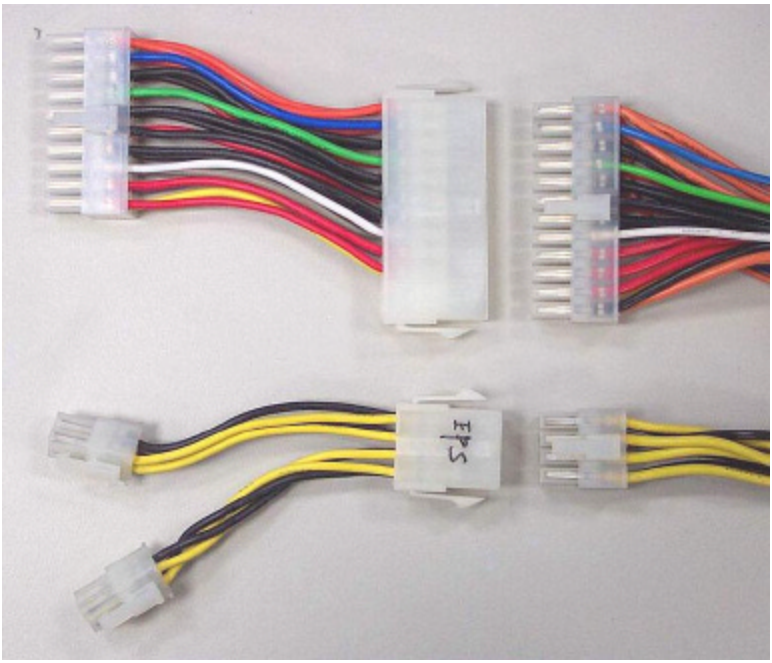


Note: J17 is to be connected to the backplane.

Installing the 24-pin EPS power cable to the ATX 20-pin power connector

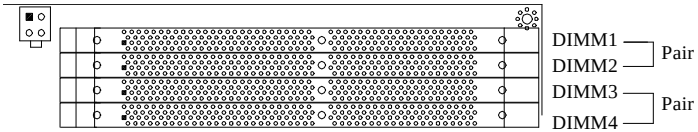


Below is a picture showing the ends of the ATX power supply and the EPS power adapter cables.



Installing the Memory

The IB910 CPU Card supports four DDR memory sockets for a maximum total memory of 8GB in DDR memory type.



DIMM Socket

Note: DIMM modules must be DDR/ECC/Reg only. Modules must be used "in pairs" and must be of the same type and size.

The memory module capacities supported are 64MB, 128MB, 256MB, 512MB, 1GB and 2GB. The following table lists the supported SDR DIMM configurations.

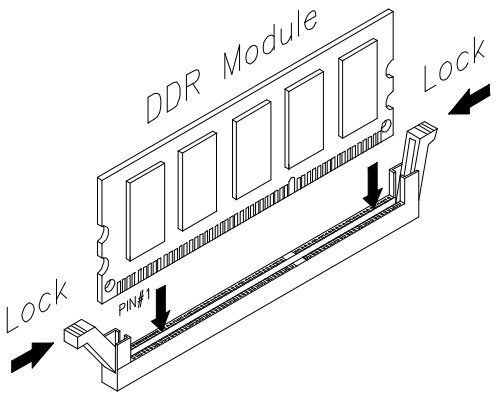
Supported DDR DIMM Configurations.

Density	64 Mbit		128Mbit		256Mbit		512Mbit	
Device Width	X4	X8	X4	X8	X4	X8	X4	X8
Single/ Double	SS/DS	SS/DS	SS/DS	SS/DS	SS/DS	SS/DS	SS/DS	SS/DS
184-pin DDR	128/256MB	64/128MB	256/512MB	128/256MB	512MB /1GB	256/512MB	1GB/2GB	512MB /1GB

Installing and Removing Memory Modules

To install the DDR modules, locate the memory slot on the CPU card and perform the following steps:

1. Hold the DDR module so that the key of the DDR module aligns with those on the memory slot.
2. Gently push the DDR module in an upright position until the clips of the slot close to hold the DDR module in place when the DDR module touches the bottom of the slot.
3. To remove the DDR module, press the clips with both hands.

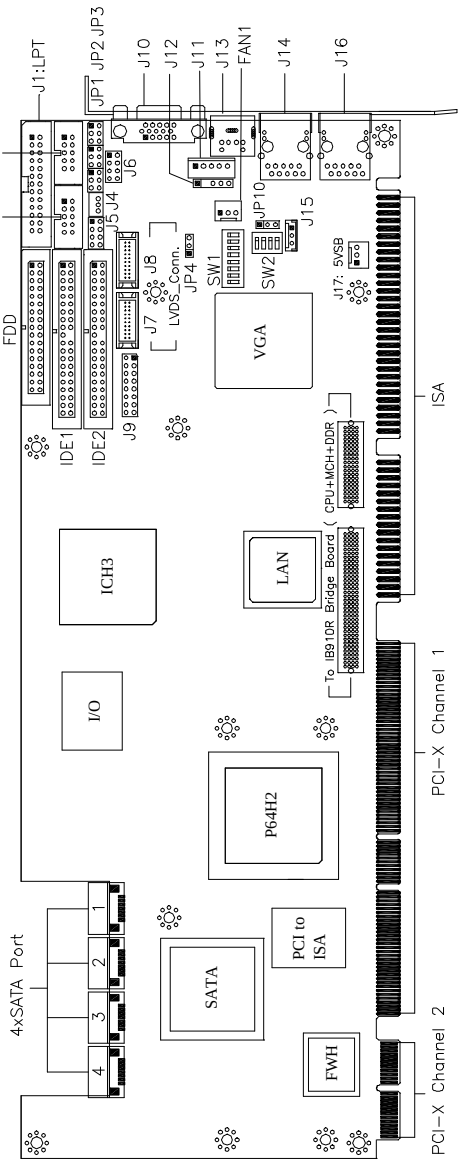


Setting the Jumpers

Jumpers are used on IB910 to select various settings and features according to your needs and applications. Contact your supplier if you have doubts about the best configuration for your needs. The following lists the connectors on IB910 and their respective functions.

Jumper Locations on IB910 20
Configuring the CPU Frequency 21
SW1 (1-4): PCI (PICMG) Bus Setting 21
SW1 (5-8): For 82546EB Gigabit LAN (J14/J16) & Marvell 88SX5041 PCI-X SATA (CON1, 2 , 3, 4) 21
SW2: LVDS Resolution Select 22
JP1, JP2, JP3: RS232/422/485 (COM2) Selection 22
JP4: LVDS Panel Power Select 22
JP10: Clear CMOS Contents 23

Jumper Locations on IB910



Configuring the CPU Frequency

The IB910 CPU card does not provide DIP switches to configure the processor speed (CPU frequency).

SW1 (1-4): PCI (PICMG) Bus and Backplane Slots Setting

PCI Setting	SW1(1-4)	Maximum Slots	Voltage
PCI-33 (default)	off on off on xx xx xx xx	6	3.3V or 5V
PCI-66	off on off off xx xx xx xx	2	3.3V
PCI-X-66 (reserved)	off off on off xx xx xx xx	4	3.3V
PCI-X-100 (reserved)	on off off off xx xx xx xx	2	3.3V
PCI-X-133 (reserved)	off off off off xx xx xx xx	1	3.3V

Note: Most PCI-X signals are timing critical. The timing critical signals have length restrictions for backplane designs based on Intel design guides.

SW1 (5-8): For on-board 82546EB Gigabit LAN (J14/J16) & Marvell 88SX5041 SATA (CON1, 2, 3, 4)

PCI-33 (default)	xx xx xx xx off on off on
PCI-X-66 (reserved)	xx xx xx xx off off on off

SW2: LVDS Resolution Select

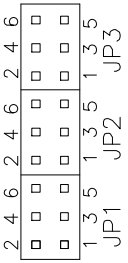
The table below shows the switch settings for the LVDS resolution.

Resolution	SW2(1-4)	Resolution	SW2(1-4)
800x600x18bit (1 channel)	off on on x	1024x768x18bit (1 channel)	on off on x
1400x1050x18bit (2 channel)	on on off x	1024x768x24bit (1 channel)	off off on x
1280x1024x18bit (2 channel)	off on off x	1600x1200x18bit (2 channel)	on off off x

Remarks: "x"=don't care

JP1, JP2, JP3: RS232/422/485 (COM2) Selection

COM1 is fixed for RS-232 use only.
COM2 is selectable for RS232, RS-422 and RS-485.
The following table describes the jumper settings for COM2 selection.



COM2 Function	RS-232	RS-422	RS-485
Jumper Setting (pin closed)	JP1: 1-2 JP2: 3-5 & 4-6 JP3: 3-5 & 4-6	JP1: 3-4 JP2: 1-3 & 2-4 JP3: 1-3 & 2-4	JP1: 5-6 JP2: 1-3 & 2-4 JP3: 1-3 & 2-4

JP4: LVDS Panel Power Select

JP4	Power	JP4	Power
	3.3V (default)		5V

JP10: Clear CMOS Contents

Use JP10, a 3-pin header, to clear the CMOS contents. *Note that the ATX-power connector should be disconnected from the CPU card before clearing CMOS.*

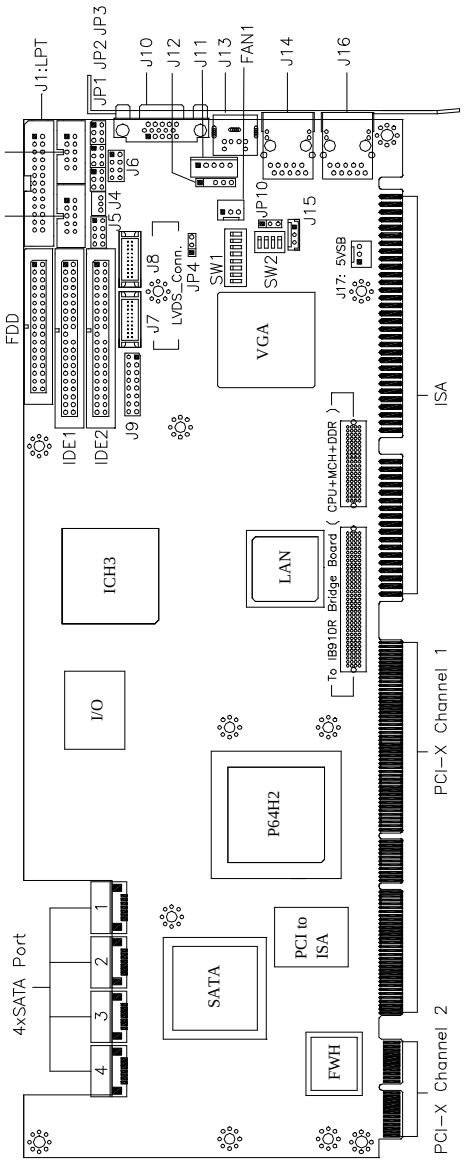
JP10	Setting	Function
	Pin 1-2 Short/Closed	Normal
	Pin 2-3 Short/Closed	Clear CMOS

Connectors on IB910

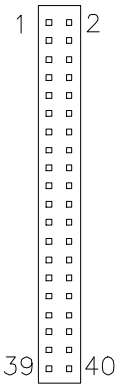
The connectors on IB910 allows you to connect external devices such as keyboard, floppy disk drives, hard disk drives, printers, etc. The following table lists the connectors on IB910 and their respective functions.

Connector Locations on IB910 24
IDE1, IDE2: EIDE Connectors 26
FDD1: Floppy Drive Connector 27
FAN1: System Fan Power Connector 27
J9: System Function Connector 28
J1: Parallel Port Connector 29
J2, J3: COM1 and COM2 Serial Ports Connector 29
J4: Wake On LAN Connector 30
J5, J6: USB Connectors 30
J7, J8: LVDS Connectors (1st channel, 2nd channel) 30
J10: VGA CRT Connector 31
J11, J12: External PS/2 Keyboard and Mouse Connector 31
J13: PS/2 Keyboard and Mouse Connector 31
J14, J16: Gigabit LAN RJ45 Connectors 32
J15: Panel Inverter Connector 32
J17: External ATX Power Connector 32
Connector Locations on IB910R 33
J1, J2: ATX 12V/+12V Power Connector 34
FAN1, FAN2: CPU Fan Power Connectors 34

Connector Locations on IB910

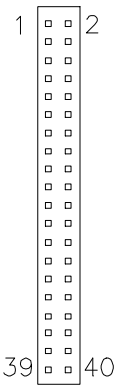


IDE1, IDE2: EIDE Connectors



IDE1

Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	Protect pin
DRQ0	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK0	29	30	Ground
IRQ14	31	32	No connect
Address 1	33	34	No connect
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground

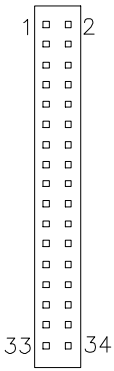


IDE2

Signal Name	Pin #	Pin #	Signal Name
Reset IDE	1	2	Ground
Host data 7	3	4	Host data 8
Host data 6	5	6	Host data 9
Host data 5	7	8	Host data 10
Host data 4	9	10	Host data 11
Host data 3	11	12	Host data 12
Host data 2	13	14	Host data 13
Host data 1	15	16	Host data 14
Host data 0	17	18	Host data 15
Ground	19	20	Protect pin
DRQ1	21	22	Ground
Host IOW	23	24	Ground
Host IOR	25	26	Ground
IOCHRDY	27	28	Host ALE
DACK1	29	30	Ground
IRQ15	31	32	No connect
Address 1	33	34	No connect
Address 0	35	36	Address 2
Chip select 0	37	38	Chip select 1
Activity	39	40	Ground

FDD1: Floppy Drive Connector

FDD1 is a 34-pin header and will support up to 2.88MB floppy drives.

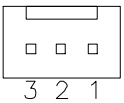


FDD1

Signal Name	Pin #	Pin #	Signal Name
Ground	1	2	RM/LC
Ground	3	4	No connect
Ground	5	6	No connect
Ground	7	8	Index
Ground	9	10	Motor enable 0
Ground	11	12	Drive select 1
Ground	13	14	Drive select 0
Ground	15	16	Motor enable 1
Ground	17	18	Direction
Ground	19	20	Step
Ground	21	22	Write data
Ground	23	24	Write gate
Ground	25	26	Track 00
Ground	27	28	Write protect
Ground	29	30	Read data
Ground	31	32	Side 1 select
Ground	33	34	Diskette change

FAN1: System Fan Power Connector

FAN1 is a 3-pin header for the system fan. The fan must be a 12V fan.



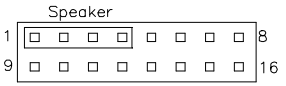
Pin #	Signal Name
1	Ground
2	+12V
3	Rotation detection

J9: System Function Connector

J9 provides connectors for system indicators that provide light indication of the computer activities and switches to change the computer status. J9 is a 16-pin header that provides interfaces for the following functions.

Speaker: Pins 1-4 (Speaker out, NC, GND, 5V)

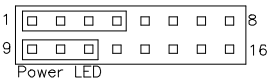
This connector provides an interface to a speaker for audio tone generation. An 8-ohm speaker is recommended.



Pin #	Signal Name
1	Speaker out
2	No connect
3	Ground
4	+5V

Power LED: Pins 9-11 (Power LED, NC, GND)

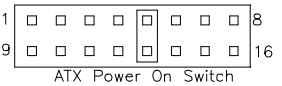
This LED indicates the status of the main power switch.



Pin #	Signal Name
9	Power LED
10	No connect
11	Ground

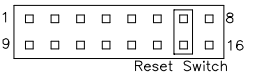
ATX Power On Switch: Pins 5, 13 (PS_ON, GND)

When pressed, this power switch will force the system to power on. When pressed again, it will force the system to power off.



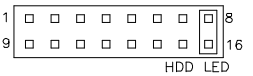
Pin #	Signal Name
5	PS ON
13	Ground

Reset Switch: Pins 7, 15 (Reset #, GND)



Pin #	Signal Name
7	Reset #
15	Ground

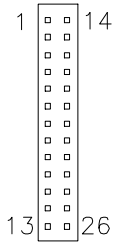
HDD LED: Pins 8, 16 (HDD Active, 5V)



Pin #	Signal Name
8	HDD Active
16	5V

J1: Parallel Port Connector

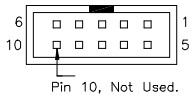
The following table describes the pin out assignments of this connector.



Signal Name	Pin #	Pin #	Signal Name
Line printer strobe	1	14	AutoFeed
PD0, parallel data 0	2	15	Error
PD1, parallel data 1	3	16	Initialize
PD2, parallel data 2	4	17	Select
PD3, parallel data 3	5	18	Ground
PD4, parallel data 4	6	19	Ground
PD5, parallel data 5	7	20	Ground
PD6, parallel data 6	8	21	Ground
PD7, parallel data 7	9	22	Ground
ACK, acknowledge	10	23	Ground
Busy	11	24	Ground
Paper empty	12	25	Ground
Select	13	N/A	N/A

J2, J3: COM1 and COM2 Serial Ports Connector

J2 and J3 both 10-pin headers, are the onboard serial port connectors.

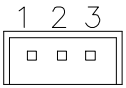


J2
Fixed as
RS-232

J3
Configurable
as RS-232/
RS-422/485
with jumper
JP1, JP2, JP3

Pin #	Signal Name		
	RS-232	RS-422	RS-485
1	DCD	TX-	DATA-
2	RX	TX+	DATA+
3	TX	RX+	NC
4	DTR	RX-	NC
5	GND	GND	GND
6	DSR	RTS-	NC
7	RTS	RTS+	NC
8	CTS	CTS+	NC
9	RI	CTS-	NC
10	NC	NC	NC

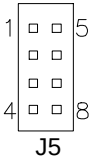
J4: Wake On LAN Connector



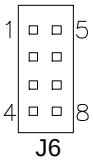
Pin #	Signal Name
1	+5VSB
2	Ground
3	Wake On LAN

J5, J6: USB Connectors

The following table shows the pin outs of the USB pin headers connectors. Overall, the two pin headers support four USB ports.



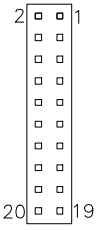
Signal Name	Pin	Pin	Signal Name
Vcc	1	5	Ground
USB0-	2	6	USB1+
USB0+	3	7	USB1-
Ground	4	8	Vcc



Signal Name	Pin	Pin	Signal Name
Vcc	1	5	Ground
USB2-	2	6	USB3+
USB2+	3	7	USB3-
Ground	4	8	Vcc

J7, J8: LVDS Connectors (1st channel, 2nd channel)

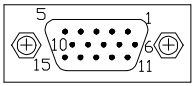
The LVDS connectors are composed of the first channel (J8) and second channel (J7) to support 24-bit or 48-bit.



Signal Name	Pin #	Pin #	**Signal Name**
TX0-	2	1	TX0+
Ground	4	3	Ground
TX1-	6	5	TX1+
5V/3.3V	8	7	Ground
TX3-	10	9	TX3+
TX2-	12	11	TX2+
Ground	14	13	Ground
TXC-	16	15	TXC+
5V/3.3V	18	17	ENABKL
+12V	20	19	+12V

J10: VGA CRT Connector

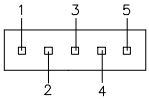
The pin assignments of the J10 VGA CRT connector are as follows:



J10

Signal Name	Pin	Pin	Signal Name
Red	1	2	Green
Blue	3	4	N.C.
GND	5	6	GND
GND	7	8	GND
N.C.	9	10	GND
N.C.	11	12	N.C.
HSYNC	13	14	VSYNC
NC	15		

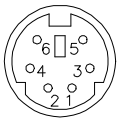
J11, J12: External PS/2 Keyboard and Mouse Connector



Pin #	J12	J11
1	Mouse data	KB clock
2	N.C.	KB data
3	Ground	N.C.
4	Vcc	Ground
5	Mouse clock	Vcc

J13: PS/2 Keyboard and Mouse Connector

J13 uses a Y-cable with for a PS/2 keyboard and a PS/2 mouse.

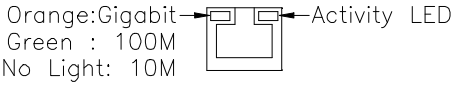


J13

Pin #	Signal Name
1	Mouse data
2	Keyboard data
3	Ground
4	Vcc
5	Mouse Clock
6	Keyboard Clock

J14, J16: Gigabit LAN RJ45 Connectors

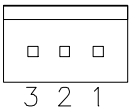
J14 and J16 are the Gigabit LAN RJ45 connectors.



J15: Panel Inverter Connector

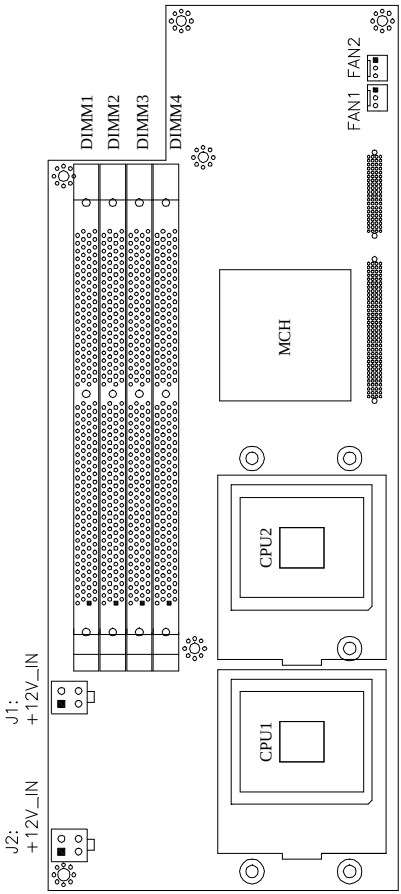
Pin #	Signal Name
1	12V
2	N.C.
3	Ground

J17: External ATX Power Connector

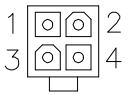


Pin #	Signal Name
1	Ground
2	PS-ON (soft on/off)
3	5VSB (Standby +5V)

Connector Locations on IB910R



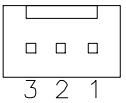
J1, J2: ATX 12V/+12V Power Connector



Pin #	Signal Name
1	Ground
2	Ground
3	+12V
4	+12V

FAN1, FAN2: CPU Fan Power Connectors

FAN1 and FAN2 are 3-pin headers for the CPU fans. The fan must be a 12V fan.



Pin #	Signal Name
1	Ground
2	+12V
3	Rotation detection

BIOS Setup

This chapter describes the different settings available in the Award BIOS that comes with the CPU card. The topics covered in this chapter are as follows:

BIOS Introduction 36
BIOS Setup 36
Standard CMOS Setup 38
Advanced BIOS Features..... 41
Advanced Chipset Features 44
Integrated Peripherals 45
Power Management Setup 47
PNP/PCI Configurations 50
PC Health Status 51
Frequency/Voltage Control..... 52
Load Fail-Safe Defaults..... 53
Load Setup Defaults 53
Set Supervisor/User Password 53
Save & Exit Setup 53
Exit Without Saving..... 53

BIOS Introduction

The Award BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel® processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also adds virus and password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Setup

The Award BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the Award BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

```
Press  <DEL>  to  Enter  Setup
```

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Phoenix - Award WorkstationBIOS CMOS Setup Utility

Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
ESC : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	
Time, Date, Hard Disk Type…	

The section below the setup items of the Main Menu displays the control keys for this menu. At the bottom of the Main Menu just below the control keys section, there is another section that displays information on the currently highlighted item in the list.

***Note**: If the system cannot boot after making and saving system changes with Setup, the Award BIOS supports an override to the CMOS settings that resets your system to its default.*

***Warning:** It is strongly recommended that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both Award and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could cause the system to become unstable and crash in some cases.*

Standard CMOS Setup

"Standard CMOS Setup" choice allows you to record some basic hardware configurations in your computer system and set the system clock and error handling. If the CPU card is already installed in a working system, you will not need to select this option. You will need to run the Standard CMOS option, however, if you change your system hardware configurations, the onboard battery fails, or the configuration stored in the CMOS memory was lost or damaged.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
Standard CMOS Features

Date (mm:dd:yy)	Tue, Jan 1 2002	Item Help
Time (hh:mm:ss)	00 : 00 : 00	Menu Level
IDE Primary Master	None	Change the day, month,
IDE Primary Slave	None	Year and century
IDE Secondary Master	None	
IDE Secondary Slave	None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All Errors	
Base Memory	640K	
Extended Memory	129024K	
Total Memory	130048K	

At the bottom of the menu are the control keys for use on this menu. If you need any help in each item field, you can press the <F1> key. It will display the relevant information to help you. The memory display at the lower right-hand side of the menu is read-only. It will adjust automatically according to the memory changed. The following describes each item of this menu.

Date

The date format is:

Day : **Sun to Sat**
Month : **1 to 12**
Date : **1 to 31**
Year : **1994 to 2079**

To set the date, highlight the "Date" field and use the PageUp/ PageDown or +/- keys to set the current time.

Time

The time format is: **Hour : 00 to 23**
Minute : 00 to 59
Second : 00 to 59

To set the time, highlight the "Time" field and use the <PgUp>/ <PgDn> or +/- keys to set the current time.

IDE Primary HDDs / IDE Secondary HDDs

The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices. Each channel can support up to two hard disks; the first is the "Master" and the second is the "Slave".

Press <Enter> to configure the hard disk. The selections include Auto, Manual, and None. Select 'Manual' to define the drive information manually. You will be asked to enter the following items.

CYLS :	Number of cylinders
HEAD :	Number of read/write heads
PRECOMP :	Write precompensation
LANDZ :	Landing zone
SECTOR :	Number of sectors

The Access Mode selections are as follows:

Auto	
Normal	(HD < 528MB)
Large	(for MS-DOS only)
LBA	(HD > 528MB and supports Logical Block Addressing)

Drive A / Drive B

These fields identify the types of floppy disk drive A or drive B that has been installed in the computer. The available specifications are:

360KB	1.2MB	720KB	1.44MB	2.88MB
5.25 in.	5.25 in.	3.5 in.	3.5 in.	3.5 in.

Video

This field selects the type of video display card installed in your system. You can choose the following video display cards:

EGA/VGA	For EGA, VGA, SEGA, SVGA or PGA monitor adapters. (default)
CGA 40	Power up in 40 column mode.
CGA 80	Power up in 80 column mode.
MONO	For Hercules or MDA adapters.

Halt On

This field determines whether or not the system will halt if an error is detected during power up.

No errors	The system boot will not be halted for any error that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not be halted for a keyboard error; it will stop for all other errors
All, But Diskette	The system boot will not be halted for a disk error; it will stop for all other errors.
All, But Disk/Key	The system boot will not be halted for a keyboard or disk error; it will stop for all others.

Advanced BIOS Features

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
Advanced BIOS Features

Virus Warning	Disabled	ITEM HELP
CPU L1 & L2 Cache	Enabled	Menu Level
CPU L3 Cache	Enabled	Allows you choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
Hyper-Threading Technology	Enabled	
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	
Second Boot Device	HDD-0	
Third Boot Device	CDROM	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Disabled	
Boot Up Numlock Status	On	
Gate A20 Option	Fast	
Typematic Rate Setting	Disabled	
Typematic Rate (chars/Sec)	6	
Typematic Delay (Msec)	250	
Security Option	Setup	
MPS Version Control For OS	1.4	
OS Select For DRAM>64MB	Non-OS2	
Report No FDD For WIN 95	Yes	
Small Logo (EPA) Show	Enabled	

Virus Warning

This item protects the boot sector and partition table of your hard disk against accidental modifications. If an attempt is made, the BIOS will halt the system and display a warning message. If this occurs, you can either allow the operation to continue or run an anti-virus program to locate and remove the problem.

CPU Internal Cache / External Cache

Cache memory is additional memory that is much faster than conventional DRAM (system memory). CPUs from 486-type on up contain internal cache memory, and most, but not all, modern PCs have additional (external) cache memory. When the CPU requests data, the system transfers the requested data from the main DRAM into cache memory, for even faster access by the CPU. These items allow you to enable (speed up memory access) or disable the cache function. By default, these items are ***Enabled***.

Hyper-Threading Technology

This field enables or disables the Hyper-Threading feature that is available with CPUs of 3.06GHz speeds (Pentium® 4) and above.

Quick Power On Self Test
When enabled, this field speeds up the Power On Self Test (POST) after the system is turned on. If it is set to *Enabled*, BIOS will skip some items.

First/Second/Third Boot Device
These fields determine the drive that the system searches first for an operating system. The options available include *Floppy*, *LS/ZIP*, *HDD-0*, *SCSI*, *CDROM*, *HDD-1*, *HDD-2*, *HDD-3*, *LAN* and *Disable*.

Boot Other Device
These fields allow the system to search for an operating system from other devices other than the ones selected in the First/Second/Third Boot Device.

Swap Floppy Drive
This item allows you to determine whether or not to enable Swap Floppy Drive. When enabled, the BIOS swaps floppy drive assignments so that Drive A becomes Drive B, and Drive B becomes Drive A. By default, this field is set to ***Disabled.***

Boot Up Floppy Seek
When enabled, the BIOS will seek whether or not the floppy drive installed has 40 or 80 tracks. 360K type has 40 tracks while 760K, 1.2M and 1.44M all have 80 tracks.

Boot Up NumLock Status
This allows you to activate the NumLock function after you power up the system.

Gate A20 Option
This field allows you to select how Gate A20 is worked. Gate A20 is a device used to address memory above 1 MB.

Typematic Rate Setting
When disabled, continually holding down a key on your keyboard will generate only one instance. When enabled, you can set the two typematic controls listed next. By default, this field is set to ***Disabled.***

Typematic Rate (Chars/Sec)
When the typematic rate is enabled, the system registers repeated keystrokes speeds. Settings are from 6 to 30 characters per second.

Typematic Delay (Msec)

When the typematic rate is enabled, this item allows you to set the time interval for displaying the first and second characters. By default, this item is set to ***250msec.***

Security Option

This field allows you to limit access to the System and Setup. The default value is ***Setup***. When you select *System,* the system prompts for the User Password every time you boot up. When you select *Setup,* the system always boots up and prompts for the Supervisor Password only when the Setup utility is called up.

MPS Version Control for OS

This option specifies the version of the Multiprocessor Specification (MPS) that the board will use. MPS version 1.4 added extended configuration tables to improve support for multiple PCI bus configurations and improve future expandability. It is also required for a secondary PCI bus to work without the need for a bridge. Newer versions of server operating systems will generally support MPS 1.4.

OS Select for DRAM > 64MB

This option allows the system to access greater than 64MB of DRAM memory when used with OS/2 that depends on certain BIOS calls to access memory. The default setting is ***Non-OS/2***.

Video BIOS Shadow

This item allows you to change the Video BIOS location from ROM to RAM. Video Shadow will increase the video speed.

C8000 - CBFFF Shadow/DC000 - DFFFF Shadow

Shadowing a ROM reduces the memory available between 640KB to 1024KB. These fields determine whether or not optional ROM will be copied to RAM.

Small Logo (EPA) Show

This field enables the showing of the EPA logo located at the upper right of the screen during boot up.

Advanced Chipset Features

This Setup menu controls the configuration of the chipset.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
Advanced Chipset Features

DRAM Timing Control	[Press Enter]	ITEM HELP
DRAM Data integrity mode	ECC	Menu Level
System BIOS Cacheable	Enabled	
Video BIOS Cacheable	Enabled	
Memory hole at 15M-16M	Disable	
Delayed Transaction	Enabled	
Delay Prior to Thermal	16 Min	
PCI-X CLK for CHA	66Mhz	
PCI-X CLK for CHB	66Mhz	

DRAM Timing Control

This option when selected lets you configure DRAM timing either by SPD or manually for items such as CAS latency time, active to precharge delay, Active to Precharge Delay, DRAM RAS# to CAS# delay and DRAM RAS# Precharge timing.

DRAM Data Integrity Mode

This option, by default, is set to ECC.

System BIOS Cacheable

The setting of *Enabled* allows caching of the system BIOS ROM at F000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

Video BIOS Cacheable

The Setting *Enabled* allows caching of the video BIOS ROM at C0000h-F7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select *Enabled* to support compliance with PCI specification version 2.1.

Delay Prior to Thermal

This field activates the CPU thermal function after the systems boots for the set number of minutes. The options are ***16Min*** and ***64Min***.

PCI-X CLK for CHA, CHB

This field sets the PCI-X channel 2 speed for the backplane PCI-X slot.

Integrated Peripherals

This section sets configurations for your hard disk and other integrated peripherals.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
Integrated Peripherals

On-Chip IDE Device	Press Enter	ITEM HELP
Onboard Device	Press Enter	Menu Level
Super IO Device	Press Enter	

OnChip IDE Device

This field contains options related to the IDE devices on board. The options and the respective default settings are listed below.

IDE HDD Block Mode : Enabled
On-chip Primary PCI IDE : Enabled
IDE Primary Master PIO : Auto
IDE Primary Slave PIO : Auto
IDE Primary Master UDMA : Auto
IDE Primary Slave UDMA : Auto
IDE Secondary Master PIO : Auto
IDE Secondary Slave PIO : Auto
IDE Secondary Master UDMA : Auto
IDE Secondary Slave UDMA : Auto

Onboard Device

This field contains options related to onboard devices including USB devices. The options and the respective default settings are listed below.

USB Controller : Enabled
USB Keyboard Support : Disabled

Super IO Device

This field contains options related to IO devices including FDD, serial ports, IR, and parallel port devices. The options and the respective default settings are listed below.

Onboard FDC Controller : Enabled
Onboard Serial Port 1 : 3F8/IRQ4
Onboard Serial Port 2 : 2F8/IRQ3
UART Mode Select : Normal
RxD, TxD Active : Hi, Lo
IR Transmission Delay : Enabled
UR2 Duplex Mode : Half
Use IR Pins : IR-Rx2Tx2
Onboard Parallel Port : 378/IRQ7
Parallel Port Mode : SPP
EPP Mode Select : EPP1.7
ECP Mode Use DMA : 3
PWRON After PWR-Fail : Off

Power Management Setup

The Power Management Setup allows you to save energy of your system effectively.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
Power Management Setup

		ITEM HELP
ACPI Function	Enabled	Menu Level
Power Management	User Define	
Video Off Method	V/H SYNC+Blank	
Video Off In Suspend	Yes	
Suspend Type	Stop Grant	
Modem Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
CPU Thermal-Throttling	50.0%	
Wake-Up by PCI card	Disabled	
Power On by Ring	Disabled	
Resume by Alarm	Disabled	
Date (of Month) Alarm	0	
Time (hh:mm:ss) Alarm	0 : 0 : 0	
** Reload Global Timer Events **		
Primary IDE 0	Enabled	
Primary IDE 1	Enabled	
Secondary IDE 0	Enabled	
Secondary IDE 1	Enabled	
FDD, COM, LPT Port	Enabled	
PCI PIRQ[A-D] #	Enabled	

ACPI Function

Use this option to enable or disable the ACPI function

Power Management

This field allows you to select the type of power saving management modes. There are four selections for Power Management.

Min. Power Saving	Minimum power management
Max. Power Saving	Maximum power management.
User Define	Each of the ranges is from 1 min. to 1hr. Except for HDD Power Down which ranges from 1 min. to 15 min. (Default)

Video Off Method

This field defines the Video Off features. There are three options.

V/H SYNC + Blank	Default setting, blank the screen and turn off vertical and horizontal scanning.
DPMS	Allows the BIOS to control the video display card if it supports the DPMS feature.
Blank Screen	This option only writes blanks to the video buffer.

Video Off In Suspend

When enabled, the video is off in suspend mode. The default setting is ***Yes***.

Suspend Type

The default setting for the Suspend Type field is ***Stop Grant***.

Modem Use IRQ

This field sets the IRQ used by the Modem. By default, the setting is ***3***.

Suspend Mode

When enabled, and after the set time of system inactivity, all devices except the CPU will be shut off.

HDD Power Down

When enabled, and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.

Soft-Off by PWRBTN

This field defines the power-off mode when using an ATX power supply. The *Instant Off* mode allows powering off immediately upon pressing the power button. In the *Delay 4 Sec* mode, the system powers off when the power button is pressed for more than four seconds or enters the suspend mode when pressed for less than 4 seconds. The default value is ***Instant Off***.

CPU Thermal Throttling

When the system enters Doze mode, the CPU clock runs only part of the time. You may select the percent of time that the clock runs.

Wake Up by PCI Card

This field allows the system to wake up from a signal received from a PCI card such as a LAN card.

Power On by Ring

This field enables or disables the power on of the system through the modem connected to the serial port or LAN.

Resume by Alarm

This field enables or disables the resumption of the system operation. When enabled, the user is allowed to set the *Date* and *Time*.

Reload Global Timer Events

The HDD, FDD, COM, LPT Ports, and PCI PIRQ are I/O events which can prevent the system from entering a power saving mode or can awaken the system from such a mode. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

PNP/PCI Configurations

This option configures the PCI bus system. All PCI bus systems on the system use INT#, thus all installed PCI cards must be set to this value.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
PnP/PCI Configurations

PNP OS Installed	No	ITEM HELP
Reset Configuration Data	Disabled	Menu Level
Resources Controlled By	Auto (ESCD)	Default is Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
IRQ Resources	Press Enter	
DMA Resources	Press Enter	
PCI/VGA Palette Snoop	Disabled	

PNP OS Installed

Enable the PNP OS Install option if it is supported by the operating system installed. The default value is ***No***.

Reset Configuration Data

This field allows you to determine whether to reset the configuration data or not. The default value is ***Disabled.***

Resources Controlled by

This PnP BIOS configures all of the boot and compatible devices with the use of a use a PnP operating system such as Windows 95.

IRQ / DMA Resources

These fields allow you to configure the IRQ / DMA Resources.

PCI/VGA Palette Snoop

Some non-standard VGA display cards may not show colors properly. This field allows you to set whether or not MPEG ISA/VESA VGA cards can work with PCI/VGA. When this field is enabled, a PCI/VGA can work with an MPEG ISA/VESA VGA card. When this field is disabled, a PCI/VGA cannot work with an MPEG ISA/VESA card.

PC Health Status

This section shows the parameters in determining the PC Health Status. These parameters include temperatures, fan speeds and voltages.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
PC Health Status

		ITEM HELP
CPU Warning Temperature	Disabled	
System Temp.	34°C	
CPU Temp.	55°C	
CPU FAN1 Speed		
CPU FAN2 Speed		
System FAN Speed		
Vcore(V)		
+1.8V		
+3.3V		
+5V		
+12V		
-12V		
- 5V		
VBAT(V)		
5VSB(V)		
Shutdown Temperature	Disabled	
CPU Fan Failure Warning	Disabled	
Sys. Fan Failure Warning	Disabled	
Cha. Fan Failure Warning	Disabled	

CPU Warning Temperature

This field sets the temperature threshold that when reached, the system would give an audible warning.

Temperatures/Fan Speeds/Voltages

These fields are the parameters of the hardware monitoring function feature of the CPU card. The values are read-only values as monitored by the system and show the PC health status.

Shutdown Temperture

This parameter sets the temperature at which the system would shut down when the system temperature reaches it.

Fan Failure Warning

The BIOS allows the system to sound a warning when the CPU fan, system fan or/and chassis fan fails to function normally through these options.

Frequency/Voltage Control

This section shows the user how to configure the processor frequency.

Phoenix - Award WorkstationBIOS CMOS Setup Utility
Frequency/Voltage Control

CPU Clock Ratio	8X	ITEM HELP
Auto Detect DIMM/PCI Clk	Disabled	Menu Level
Spread Spectrum	Disabled	

CPU Clock Ratio

By default, the CPU Clock Ratio, is set to 8X.

Auto Detect DIMM/PCI Clk

This field enables or disables the auto detection of the DIMM/PCI clock. The default setting is ***Disabled***.

Spread Spectrum

This field sets the value of the spread spectrum. The default setting is ***Disabled***. This field is for CE testing use only.

Load Fail-Safe Defaults

This option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high-performance features.

Load Setup Defaults

This option allows you to load the default values to your system configuration. These default settings are optimal and enable all high performance features.

Set Supervisor/User Password

These two options set the system password. Supervisor Password sets a password that will be used to protect the system and Setup utility. User Password sets a password that will be used exclusively on the system. To specify a password, highlight the type you want and press <Enter>. The Enter Password: message prompts on the screen. Type the password, up to eight characters in length, and press <Enter>. The system confirms your password by asking you to type it again. After setting a password, the screen automatically returns to the main screen.

To disable a password, just press the <Enter> key when you are prompted to enter the password. A message will confirm the password to be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

Save & Exit Setup

This option allows you to determine whether or not to accept the modifications. If you type "Y", you will quit the setup utility and save all changes into the CMOS memory. If you type "N", you will return to Setup utility.

Exit Without Saving

Select this option to exit the Setup utility without saving the changes you have made in this session. Typing "Y" will quit the Setup utility without saving the modifications. Typing "N" will return you to Setup utility.

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Drivers Installation

This section describes the installation procedures for software and drivers under the Windows 98, Windows NT 4.0 and Windows 2000. The software and drivers are included in the package. If you find the items missing, please contact the vendor where you made the purchase. The contents of this section include the following:

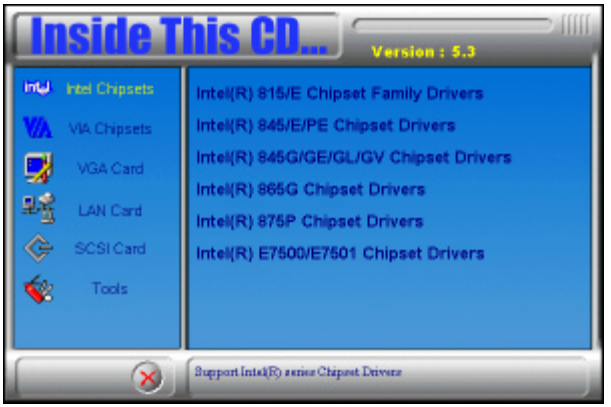
Windows 2000/XP Chipset Drivers Installation 56
Intel® Software Installation Utility 56
ATI M7 VGA Driver Installation 57
PCI Ethernet Drivers 59
Marvell SATA Windows Drivers 60

Windows 2000/XP Chipset Drivers Installation

Intel® Software Installation Utility

The Intel® Chipset Software Installation Utility will enable Plug & Play INF support for Intel® chipset components. Follow the instructions below to complete the installation under Windows 2000/XP.

1. Insert the CD that comes with the CPU card and the screen below would appear. Click Intel(R) E7500/E7501 Chipset Drivers.



2. Click Intel(R) Chipset Software Installation Utility.

3. When the Welcome screen appears, click Next to continue.

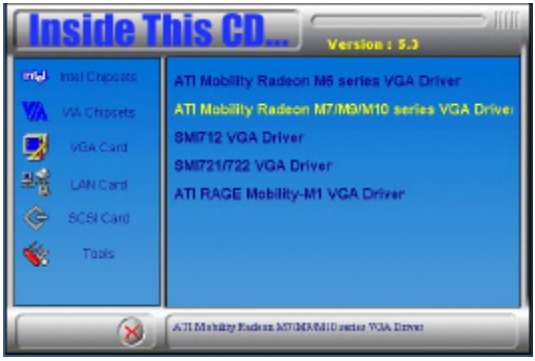
4. Click Yes to accept the software license agreement and proceed with the installation process.

5. On Readme Information screen, click Next to continue the installation.

6. The Setup process is now complete. Click Finish to restart the computer and for changes to take effect. When the computer has restarted, the system will be able to find some devices. Restart your computer when prompted.

ATI M7 VGA Driver Installation

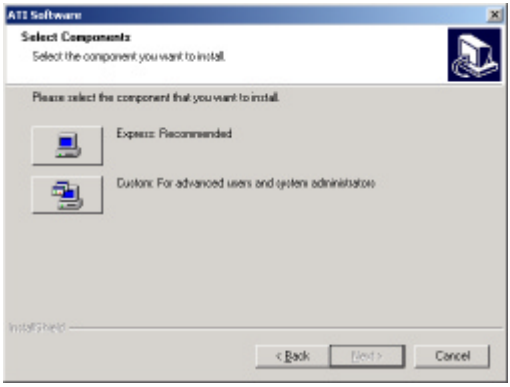
1. Insert the CD that comes with IB910. On the initial screen, click VGA Card on the left side and the screen below would appear. Click ATI Mobility Radeon M6/M7 series VGA Driver.



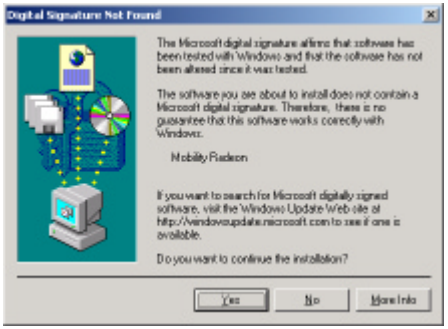
2. When the Welcome screen appears, click Next to continue.

3. Click Yes to accept the software license agreement and proceed with the installation process.

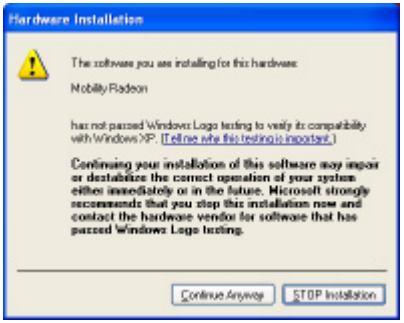
4. Select on the Express icon and click Next to continue.


ATI Software
Select Components
Select the component you want to install.
Please select the component that you want to install.
Express: Recommended
Custom: For advanced users and system administrators
< Back
Next >
Cancel

5. This screen will appear under Windows 2000 installation (not Windows XP). Click Yes to continue the installation process.


Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
Mobility Radeon
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
Do you want to continue the installation?
Yes
No
More Info

6. This screen will appear under Windows XP installation (not Windows 2000). Click Yes to continue the installation process.


Hardware Installation
The software you are installing for this hardware:
Mobility Radeon
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

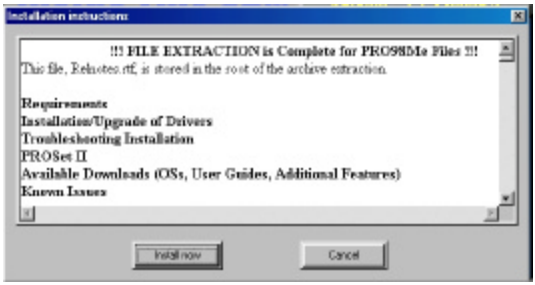
7. The Setup process is now complete. Click Finish to restart the computer and for changes to take effect. Restart your computer when prompted.

PCI Ethernet Drivers

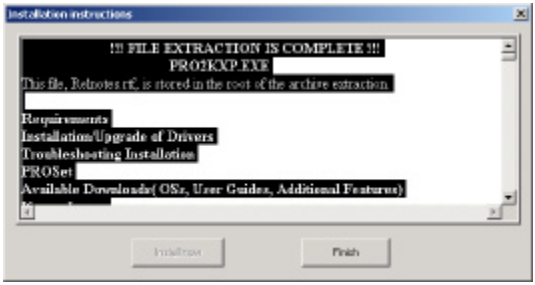
Follow the steps below to install the LAN drivers in Windows 2000/XP.

1. Insert the CD that comes with IB910 and the screen below would appear. Click LAN Card on the left side and then click Intel(R) PRO LAN Drivers.

2. Click Install Now.



3. Click Finish to complete the LAN drivers installation process.



Marvell SATA Windows Drivers

To install the Marvell SATA drivers in Windows 2000/XP, use the floppy diskette containing the drivers that came with the CPU card package.